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AESTRACT

DESIGNED TO PROVIDE DEPTH FOR PARTICIPANTS IN A WORKSHOP ON THE BLIND, BIBLIOGRAPHICAL SELECTIONS WERE MADE TO DEVELOP EACKGROUND OF A REVIEW OF RESEARCH, PROVIDE RELEVANT BASIC INFORMATION, AND DOCUMENT THE FIELD OF MATHEMATICS FOR THE BLIND. ONE HUNDRED AND THIRTY SEVEN REFERENCES ON MATH ARE PRESENTED, SOME IN FOREIGN LANGUAGES AND SOME WITH ANNOTATIONS. (RJ)



SELECTED BIBLIOGRAPHY ON MATHEMATICS FOR THE BLIND

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Eastern Michigan University
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE OFFICE OF EDUCATION

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The bibliography was designed to provide the depth dimension for a Workshop in Mathematics for the Blind. Some entries might appear to be outdated or irrelevant in another context. However, selections were made on the basis of these criteria: (1) the readings should be helpful in developing background, rationale, and/or a review of research for persons stimulated to further study by the workshop; (2) basic information should be relevant irrespective of the year of publication; and (3) in the wider sense, the field of mathematics for the blind should be well documented.

L. F. G.

S. J. P.



SELECTED BIBLIOGRAPHY ON MATHEMATICS FOR THE BLIND 1969

- Auld, U. MATH FOR THE BLIND, AN UNUSUAL APPROACH IN TEACHING MATHEMATICS. Michigan Education Journal (April) 1964, 41, 22-4.
- Bannister, A. R. ARITHMETIC. Teacher of the Blind, 1926, 14, 84-92.
- Benedict, H. F. APPROXIMATE AND MENTAL ARITHMETIC. American Association of Instructors of the Blind, 1922, p. 66-69.
- Bolte, F. ZUM ERSTEN RECHNEN IN DER BLINDENSCHULE. Blinden-freund, 1904, 24, 209-212.
- Brandstaeter, A. LEHRPLAN FUR DEN RAUMLEHREUNTERRICHT IN DER BLINDENSCHULE. Blindenfreund, 1912, 32, pp. 108-115, 129-141, 204-209, 232, 234, 246-264, 277-287. (A detailed course of study in geometry in schools for the blind.)
- Brandstaeter, A. RAUMLEHRE. In Mell, Encyklopadisches Handbuch des Blindenwesens, 1900, pp. 622-624. (Methods of teaching geometry to the blind.)
- Bruce, R. E. MATHEMATICAL AIDS FOR TEACHING BLIND CHIL-DREN. International Congress on Technology & Blindness, New York, 1963, pp. 169-174.
- Buonvino, A. TABELLA DEI SEGNI MATEMATICI CON REGOLE ILLUSTRA-TIVE. Genova, Biblioteca Nazionale pei Ciechi Regina "Margherita", 192?, 8p. (Italian system of mathematical notation.)
- Buonvino, A. DER ZAHLENKREIS I-20. Blindenfreund, 1915, 35, 89-93. (Elementary arithmetic in a school for the blind carried on to include the numbers 10-20.)
- Burde. DER ERSTE RECHENUNTERRICHT. Blindenfreund, 1914, 34, 25-29, 69-70. (Elementary arithmetic in a school for the blind. The children are made familiar with the numbers 1-10.)



- Buteiko, E. M. (School for Blind Children, Kharkov, USSR)

 FORMIROVANIE PROSTRANSTVENNYKH PREDSTAVLENU I VASPITANIE

 NAVYKOV SAMOSTOYATEL NOGO DOKAZATEL STVA TEOREM.

 (Formation of spatial concepts and the training of

 habits of independent demonstrations of theorems)

 Spetsial naya Shkola, 1967, #2, 101-108. (Recommendations in the teaching of geometry to 7th-9th grade

 blind children in order to expand and develop their

 limited spatial conceptions and related logical think
 ing.)
- Calhoon, E. MATHEMATICS IN THE DARK. (Abacus) School Science and Mathematics (Oct.) 1959, 59, 569-570.
- Cambridge, M. QUESTIONING THE APPLICATION OF PUBLIC SCHOOL METHODS IN TEACHING ARITHMETIC COMPUTATION TO BLIND CHILDREN. American Association of Workers for the Blind, 1948, 74-78.
- Campbell, Helen M. THE TEACHING OF ARITHMETIC TO FIRST GRADE BLIND. Unpublished Master's thesis. New Jersey State Teachers College, Newark, May, 1957.
- Chadderdon, W. E. TIME SAVING METHODS FOR THE BLIND IN MATHE-MATICS. American Association of Instructors of the Blind, 1940, 55-58.
- Chapple, B. P. TEACHING GEOMETRY IN SCHOOLS FOR THE BLIND. Teachers Forum, 1930, 2, (5), 8-11.
- Cimatti, L. IL DISEGNO TECNICO NELL EDUCAZIONE PREPROFESSIONALE DEI CIECHI. Rivista Pedagogica, 1933, 26, 714-734. (Technical drawing in the prevocational education of the blind. Much space is given to geometrical drawing.)
- Coleman, M. E. A GUIDE TO THE TEACHING OF ARITHMETIC IN GRADES KINDERGARTEN GRADE TWO. Philadelphia; Overbrook School for the Blind, 1963, 67.
- Collins, J. H. GEOMETRY--WITH MODERN IMPROVEMENTS. Light, 1936, 8, (3), 5-6.
- Coville, M. G. TEACHING GEOMETRY TO BLIND PUPILS. Teachers Forum, 1929, 1, (6), 7-8.



- Cranmer, T. V. THE ABACUS AND ITS USE BY THE BLIND.
 International Congress on Technology and Blindness,
 New York, 1962, V. III, 174-179.
- Crook, W. J. ABACUS ARITHMETIC. Palo Alto, California, Pacific Books, 1958.
- Davidow, M. THE ABACUS MADE EASY. Philadelphia, Overbrook School for the Blind, 1966.
- Davis, H. A. WHAT MATHEMATICS SHOULD BE TAUGHT IN A SCHOOL FOR THE BLIND. American Association of Instructors of the Blind, 1938, 55-58.
- Deavin, W. E. THE TEACHING OF GEOMETRY IN NON-SIGHTED SCHOOLS. Teacher of the Blind, 1933, 21, 197-198.
- Demal, F. DER DEXIMALPUNKT. Zeitschrift für das österreichische Blindenwesen, 1918, 5, 1025-1027. (The writer points out that the usual position of the decimal point is ambiguous and may lead to mistakes in the solution of arithmetic problems.)
- Diderot, D. LETTER ON THE BLIND FOR THE USE OF THOSE WHO SEE. Early Philosophical Works, trans. and ed. by Margaret Jourdain. Chicago, Open Court Pub. Co., 1916, 88-104. (Discusses Nicholas Saunderson and his works in Mathematics.)
- Drake, H. DRAMATIZING NUMBERS. American Association of Instructors of the Blind, 1948, 70-73.
- Ek, G. INSTRUCTION IN GEOMETRY. Teachers Forum, 1929, 2, (1), 5.
- Emblen, J. R. SIMPLER BRAILLE MATHEMATICAL NOTATION. New Beacon, 1940, 24, 55-56.
- Feuersenger. EINE RECHENMASCHINE FÜR BLINDE. Blindenfreund, 1932, 52, 261-263.
- Foutch, T. A. THE TAYLOR SLATE. Teachers Forum, 1929, 1, (6), 6.
- Frampton, M. E., ed. EDUCATION OF THE BLIND; A STUDY OF METHODS OF TEACHING THE BLIND. Yonkers-on-Hudson, World Book Co., 1940, 116-128. (Meaningful mathematics for the blind citizen.)



- French, R. S., and Morgan, D. H. AIDS AND APPLIANCES IN EDUCATION AND RECREATION. In Lende, H., ed., What of the blind? II, 1941, 74-86.
- Gattegno, C. MATHEMATICS WITH NUMBERS IN COLOR, BOOKS A-D. Cuisenaire Co. of America, 1964.
- Gibbon, W. THE BLIND STUDENT OF MATHEMATICS. Mentor, 1893, 3, 145-148.
- Gissoni, F. L. THE ABACUS EXPLOSION. The New Outlook for the Blind, Feb. 1965, 59, 75-76.
- Gissoni, F. L. THE USE OF THE ABACUS (SOROBAN) IN ELECTRONIC CALCULATION. International Congress on Technology and Blindness, New York, 1962, v. III, 371-375.
- Gissoni, F. L. USING THE CRANMER ABACUS FOR THE BLIND.

 American Printing House for the Blind, 1964.
- Grasemann, P. DER RAUMLEHREUNTERRICHT UND SEINE PSYCHOLOGISCHE GRUNDLEGUNG. Blindenfreund, 1913, 33, 121-33, 85-102, 117-133, 189-192, 214-222. (Instruction in geometry and its psychological foundation.)
- Graves, J. S. THE USE AND ABUSE OF ARITHMETIC SLATES. American Association of Instructors of the Blind, 1902, 37-39.
- Grenville, Thomas. A DESCRIPTION OF A MACHINE FOR TEACHING THE BLIND ARITHMETIC. Polite Arts, 1770, 120-144.
- Guillie, S. AN ESSAY ON THE INSTRUCTION AND AMUSEMENTS OF THE BLIND. London, R. Phillips, 1819, 113-117. (An early treatise on methods and appliances used in teaching mathematics to the blind.)
- Haas, V. E. ADDITION AND SUBTRACTION ON THE SOROBAN. The Mathematics Teacher (Nov.) 1965, 58, 603-21.
- Haas, V. E. USE OF NUMBER RODS IN TEACHING MATHEMATICS TO THE VISUALLY HANDICAPPED CHILD. Exceptional Children, (February) 1965, 31, (6), 297-300.
- Hamilton, D. W. AN EXPERIMENT IN INDIVIDUAL INSTRUCTION IN ALGEBRA IN A SCHOOL FOR THE BLIND. Teachers Forum, 1934, 7, 2-5.



- Hatwell, Y. ETUDE DE QUELQUES ILLUSIONS GEOMÉTREQUES TACTILES CHEZ LES AVEUGLES. Annee psychologique, 1960, 1, 11-27.
- Hatwell, Y. LA PERCEPTION TACTILE DES FORMES GEOMÉTRIQUES:
 PERCEPTION ET ACTIVITÉ PERCEPTIVE. J. Psychol. Norm.
 Pathol, 1960, 57, 165-176.
- Hauy, V. AN ESSAY ON THE EDUCATION OF THE BLIND. Leicester, Tompkin and Shardlow, 1889, 217-259. (The pioneer educator of the blind discusses methods of teaching blind children. One chapter is devoted to means of teaching mathematics.)
- Hayes, S. P. ARITHMETIC: TEACHING AND TESTING IN SCHOOLS FOR THE BLIND. Outlook for the Blind, 1944, 38, 99-108.
- Hein, H. E. and Ramke, D. WHAT SHOULD BE STRESSED IN ARITHMETIC AND GEOMETRY IN SCHOOLS FOR THE BLIND. Teachers Forum, 1935, 7, 75-76, 79.
- Helms, A. TAPE RECORDING BOOKS FOR THE BLIND. American Foundation for the Blind, 1962.
- Helms, H. A FINDINGS IN THE TEACHING OF ALGEBRA. American Association of Instructors of the Blind, 1950, 117-119.
- Hinze. RECHNEN. In Mell, Encyklopadisches Handbuch des Blindenwesens, 1900, 624-638. (An historical sketch of methods and appliances used in teaching arithmetic to the blind.)
- Hoard, S. THE MODEL 4-A SLIDE RULE AND ITS USE. American Association of Instructors of the Blind, 1950, 120-122.
- Hurst, A. D. WAYS AND MEANS OF TEACHING GEOMETRY TO BLIND STUDENTS. Teachers Forum, 1932-33, 5, pp. 25-28, 53-57. (Also Teacher of the Blind, 1933, 21, 157-165.)
- Hussey, S. R. IS THIS WAY PROGRESS? Outlook for the Blind, 1948, 24, 247-250.
- Hussey, S. R. THE "HALIFAX METHOD" OF ARITHMETICAL CALCULA-TIONS. International Journal for the Education of the Blind, 1956, 6, 36-40.



- Illingworth, W. H. HISTORY OF THE EDUCATION OF THE BLIND.

 London, Sampson, Low, Marston & Co., 1910, 85-90.

 (Description and illustrations of the Saunderson arithmetic board as well as of other appliances for teaching arithmetic to the blind.)
- International Conference of Educators of Blind Youth, Hanover, 1962. PROCEEDINGS OF THE THIRD QUINQUENNIAL CONFERENCE HELD AT THE HANOVER SCHOOL FOR THE BLIND, Hanover, German Federal Republic, August 6-18, 1962.
- Iowa Braille and Sight Saving School. MATHEMATICS CURRICULA. 1955.
- Justmans, J. & Wass, L. READING AND ARITHMETIC ACHIEVEMENT OF 6TH & 8TH GRADE VISUALLY HANDICAPPED PUPILS, OCTOBER 1953 & OCTOBER 1954. New York Board of Education, Bureau of Educational Research, 1954.
- Klein, J. W. LEHRBUCH ZUM UNTERRICHT DER BLINDEN. Wien, Anton Strauss, 1819, pp. 86-160, 234-257. (Suggestions for teaching arithmetic and geometry to blind children, written by the founder and first director of the institute for the blind in Vienna.)
- Kojima, T. THE JAPANESE ABACUS, ITS USE AND THEORY.
 Rutland, Vermont, Charles E. Tuttle, 1954.
- Kranz, J. METHODISCHE BEHANDIING DES "RABATTRECHNENS".

 Blindenfreund, 1932, 52, 139-143. (Methods of computing discounts as taught to blind children.)
- Kuhler, G. M. LESSONS & EXERCISES ON THE NEMETH CODE. Des Moines, Iowa, Iowa Commission for the Blind, 1966.
- Kunz, M. ZUM ERSTEN RECHENUNTERRICHT. Blindenfreund, 1905, 25, 37.
- Kutscher, F. DIE EINFACHE BUCHHALTUNG IN DER BERUFSSCHULE IN DER BLINDENANSTALT. Blindenfreund, 1932, <u>52</u>, 264-271. (A course of study in simple bookkeeping for schools for the blind.)
- Lane, A. M. PRIMARY NUMBERS THROUGH CONSTRUCTIVE MEASURING.
 Outlook for the Blind, 1910, 3, 154-155. (Walter method of teaching numbers.)



- Legrand, C. L'ENSEIGNEMENT DES MATHEMATIQUES DANS LES ECOLES D'AVEUGLES. In Villey & Perouze, Études Pédagogiques, 1923, 121-123. (The study of mathematics in schools for the blind.)
- Levy, W. H. BLINDNESS AND THE BLIND. London, Chapman & Hall, 1872, 135-138.
- Liebig, F. WRITTEN COMPUTATION ON THE PITCH BRAILLE WRITER.
 Outlook for the Blind, 1949, 43, 259-260.
- Lochhead, H. M. A SIMPLER BRAILLE MATHEMATICAL NOTATION.

 Teacher of the Blind, 1940, 28, 95-98.
- Lochhead, H. M. THE TEACHING OF MATHEMATICS TO BLIND CHILDREN. Teacher of the Blind, 1945, 33, 82-90.
- Lochhead, H. M. USE OF THE BRAILLE FRAME IN MATHEMATICS.

 Teacher of the Blind, 942, 30, 58-62.
- Los Angeles City School District. EDUCATION OF THE BLIND CHILD, A GUIDE FOR TEACHERS. 1951.
- McCutchan, D. ARITHMETIC IN OUR LOWER GRADES. Outlook for the Blind, 1942, 30, 40-41.
- Mahler, T. HILFSMITTEL FUR HÖHERE MATHEMATIK FUR BLINDE.

 Blindenfreund, 1925, 45, 121-122. (Description of the Mahler apparatus for teaching advanced mathematics to the blind.)
- MATHEMATICS AND THE BLIND STUDENT. New Beacon, 1934, 18, 146-148.
- Mattei, T. L. UTILISATION DE LA TABLETTE BRAILLE POUR LES OPÉRATIONS ARITHMÉTIQUES. In Villey & Perouze, Études Pedagogiques, 1923, 134-137. (Use of the braille slate for solving problems in arithmetic.)
- Matthies, A. ZUM SCHRIFTLICHEN RECHNEN AUF DER PUNKTSCHRIFTTAFEL. Blindenfreund, 1932, 52, 257-261. (Suggestions and rules for the use of the braille slate in solving arithmetic problems.)
- Merry, F. K. ANOTHER EXPERIMENT ON TYPE SLATES. Teachers Forum, 1931, 4, 14-15. (A comparison of the Taylor and the Cubarithm slates.)



- Merry, F. K. A SURVEY OF THE PROBLEM-SOLVING ABILITY OF PUPILS IN SIX RESIDENTIAL SCHOOLS FOR THE BLIND. Teachers Forum, 1931, 3, (5), 12-15.
- Merry, F. K. A THIRD EXPERIMENT: ON TYPE SLATES. Teachers Forum, 1933, 5, 48-50, 52. (Reports on tests made on the Taylor and the Cubarithme slates.)
- Merry, F. K. TYPES OF ERRORS MADE IN FUNDAMENTAL ARITHMETICAL PROCESSES BY PUPILS IN SIX SCHOOLS FOR THE BLIND. Teachers Forum, 1930, 3, (2), 8-19.
- Merry, F. K. WHAT BLIND PEOPLE THINK ABOUT ARITHMETIC.

 Teachers Forum, 1929, 2, (1), 8-12.
- Messner, A. METHODE UND LEHRMITTEL FUR DEN RECHENUNTERRICHT IN DER ELEMENTARKLASSE IN BLINDENANSTALTEN.

 Blindenfreund, 1891, 11, 152-159. (Methods and appliances for teaching arithmetic in the elementary grades of schools for the blind.)
- Meyer, G. F. DEVICES IN MATHEMATICS. American Association of Instructors of the Blind, 1924, 202-208. (Discussion of the Taylor and Cubarithme slates and other appliances used in teaching mathematics to the blind.)
- Michigan School for the Blind. COURSE OF STUDY SECONDARY DEPT. 1957.
- Michigan School for the Blind. TOWARD THE TOTAL GROWTH AND DEVELOPMENT OF THE VISUALLY HANDICAPPED CHILD. (Suggested curricula activities.) 1954.
- Missouri School for the Blind. CURRICULUM GUIDE GRADES 7-12, 1964.
- Montgomery, R. L. THE BRAILLE SLIDE RULE; A TEACHERS' AND STUDENTS' GUIDE TO THE USE OF THE BRAILLE SLIDE RULE. American Association of Instructors of the Blind, 1946, 90-92.
- Morey, C. ARITHMETIC GAMES IN A SCHOOL FOR THE BLIND. Teachers Forum, 1934, 6, 48-49, 55.
- Morgan, L. H. and Wellington, J. A. VISUAL AIDS IN THE TEACHING OF GEOMETRY TO THE BLIND. Teachers Forum, 1939, 11, 70-72.



- Muller, H. PSYCHOLOGISCHE ANALYSE EINIGER RECHENVORGANGE.

 Blindenfreund, 1908, 28, 82-94. (Psychological analysis of some arithmetic processes.)
- Nemeth, A. THE NEMETH CODE OF BRAILLE MATHEMATICS AND SCIEN-TIFIC NOTATION. Social Rehabilitation Gervice, 1683S. (Braille and ink print, American Print 7 House for the Blind, Louisville, Kentucky, 1965.
- Nemeth, A. TEACHING MEANINGFUL MATHEMATICS TO BLIND AND PARTIALLY SIGHTED CHILDREN. New Outlook for the Blind, 1959, 53, 318-21.
- Neumann, F. T. MENTAL ARITHMETIC. American Association, Instructors of the Blind, 1964, 45-49.
- Neumann, F. T. THE INSTRUCTION OF THE BLIND IN ADVANCED MATHEMATICS. American Association of Instructors of the Blind, 1946, 92-99.
- New York City Board of Education. EDUCATING VISUALLY HANDI-CAPPED PUPILS. (Curriculum adaptations in the following areas are provided ... mathematics.) ED017 106. (ERIC document)
- New York (City). INSTRUCTING VISUALLY LIMITED BOYS AND GIRLS.

 1956-57.
- New York State School for the Blind. A COURSE OF STUDY IN MATHEMATICS. Gr K-6, Batavia, New York, 1963.
- Nolan, C. Y. & Morris, J. E. ABACUS AS A TOOL FOR TEACHING ARITHMETIC TO BLIND CHILDREN REPORT OF A PILOT STUDY. Louisville, Kentucky, American Printing House for the Blind, 1961.
- Nolan, C. Y. ACHIEVEMENT IN ARITHMETIC COMPUTATION: ANALYSIS OF SCHOOL DIFFERENCES AND IDENTIFICATION OF AREAS OF LOW ACHIEVEMENT. International Journal for the Education of the Blind, 1959, 8, 125-29.
- Nolan, C. Y. & Bruce, R. E. AN EXPERIMENTAL PROGRAM IN ELEMENTARY MATHEMATICS FOR THE BLIND. International Journal for the Education of the Blind, 1962, 11, 71-74.
- Nolan, C. Y. & Morris, J. R. JAPANESE ABACUS AS A COMPUTA-TIONAL AID FOR BLIND CHILDREN. Exceptional Children, 1964, 31, 15-17.



- Nolan, C. Y. RESEARCH IN TEACHING MATHEMATICS TO BLIND CHILDREN. International Journal for the Education of the Blind, 1964, 13, 97-100.
- Nolan, C. Y. & Ashcroft, S. C. THE STANFORD ACHIEVEMENT ARITHMETIC COMPUTATION TESTS. International Journal for the Education of the Blind, 1959, 8, 89-92. (A study of an experimental adaptation for Braille administration.)
- Nygard, M. E. SUGGESTIONS FOR TEACHING EIGHTH GRADE ARITH-METIC IN SCHOOLS FOR THE BLIND. New York, New York Institute for the Education of the Blind, 1937, 6, 91-104.
- Ohio State School for the Blind. HIGH SCHOOL. 1960.
- Ohio State School for the Blind. COURSE OF STUDY. 1960.
- Perouze, G. LE CUBARITHMES. In Villey & Perouze, Etudes Pédagogiques, 131-133.
- Peyer, H. DER ERSTE RECHENUNTERRICHT IN DER BLINDENSCHULE.

 Blindenfreund, 1904, 48-57; & 1905, 25, 77-79. (A report of experiments with Lay's so-called button-apparatus in teaching elementary arithmetic to blind children.)
- Poschl, J. DER NEUE WIENER ZIFFERRECHENAPPARAT MIT BRAILLE-TYPEN. Blindenfreund, 1908, 28, 302-306. (A description of the new "Vienna" arithmetic slate adapted for use with braille type.)
- Poschl, J. DER RECHENUNTERRICHT UND DER GEOMETRISCHE UNTERRICHT. In Mell, Blindenunterricht, 1910, 107-130. (Two illustrated articles on methods of teaching arithmetic and geometry to the blind. Various appliances are discussed in detail.)
- Potter, Claudia. USE OF THE COURTES TESTS IN ARITHMETIC. American Association of Instructors of the Blind, 1920, 28-31.
- Prine, O. DIAGNOSTIC AND REMEDIAL TECHNIQUES IN TEACHING ARITHMETIC. Teachers Forum, 1939, 12, 6-15, 18-19.
- Rex, E. & Calovini, G. LEARNING THROUGH ILLUSTRATION.

 Teaching Exceptional Children, (Fall), 1968, 14-20.



- Rich, C. C. & Anderson, R. P. A TACTUAL FORM OF THE PROGRES-SIVE MATRICES FOR USE WITH BLIND CHILDREN. Social Rehabilitation Service 0670. (#11816) also Psych. Abst. 1965, 39, 42.
- Richard, R. E. THE ABACUS AS AN AID IN TEACHING ARITHMETIC.
 Outlook for the Blind, 1948, 42, 35-39.
- Richard, R. E. ADAPTING THE ABACUS FOR THE USE OF THE BLIND.
 Master's thesis, University of California, 1947, 94
 pgs., (Typewritten).
- Riddle, C. C. WHAT ARE THE MOST RETARDING FACTORS IN LEARNING SEVENTH AND EIGHTH GRADE ARITHMETIC? American Association of Instructors of the Blind, 1948, 86-95.
- Robinson, Ruth Puckett. ARITHMETIC FOR DAILY LIFE. In Frampton, (Ed.), Education of the Blind. Yonkers-on-Hudson, N.Y., World Book Company, 1940, 60-65.
- Scherer, F. DIE ZUKUNFT DER BLINDEN. Regensburg, J. Reitmayr, 1866, 63-79. (An historical sketch of methods and appliances used in teaching mathematics to the blind.)
- Schoonmaker, M. B. METHODS IN MATHEMATICS, ARITHMETIC.

 American Association of Instructors of the Blind, 1920, 25-28.
- Silvis, L. B. MATHEMATICS FOR THE RECENTLY BLINDED ADULT.
 American Association of Instructors of the Blind,
 1950, 122-124.
- Snyder, H. A CHIP FROM AN OHIO WORKSHOP. American Association of Instructors of the Blind, 1884, 39-46.
- Smith, B. F. THE CATHERINE STERNS MATERIALS FOR BLIND CHILDREN. American Association of Instructors of the Blind, 1964, 50-54.
- Spellings, W. W. THE PLACE OF MATHEMATICS IN THE JUNIOR HIGH SCHOOL. American Association of Instructors of the Blind, 1938, 186-188.
- Waterhouse, E. J. ARITHMETIC AIDS FOR THE BLIND. International Journal for the Education of the Blind, 1955, 5, 25-29.



- waterhouse, E. U. EQUIPPING THE MATHEMATICS LABORATORY.
 American Association of Instructors of the Blind,
 1938, 53-55.
- Waterhouse, E. J. WRITING LARGE AND SMALL NUMBERS IN BRAILLE. Outlook for the Blind, 1947, 41, 18.
- Watzel. DIE BEDEUTUNG DES RAUMLEHREUNTERRICHTS IN DER BLINDENSCHULE. Blindenlehrerkongress, Halle, 1904, 198-217. (The importance of the study of geometry in schools for the blind. Many references to writers on the psychological conception of space.)
- Wexler, A. GEOMETRY FOR BLIND STUDENTS. New Beacon, (April), 1966.
- Woodward, R. THE USE OF APPARATUS IN TEACHING JUNIOR AND SENIOR HIGH SCHOOL MATHEMATICS IN SCHOOLS FOR THE BLIND TO MAKE THE SUBJECT LESS ABSTRACT. American Association of Instructors of the Blind, 1940, 59-60.
- Wright, H. W A METHOD OF DOING GRAPHS. Teachers Forum, 1934, 39, 724-27.
- Zech, F. HANDBETÄTIGUNG IN DER RAUMLEHRE. Blindenfreund, 1922, 42, 22-25. (The use of the hand in the study of geometry in schools for the blind. Exercises for the development of the skill of the hand are recommended.)



PRIMARY SOURCES CONSULTED

- 1. Bibliography file, Department of Special Education, Eastern Michigan University.
- 2. DISSERTATION ABSTRACTS 1953-1968.
- 3. Lende, BOOKS ABOUT THE BLIND. 1953.
- 4. IRIS, INDEX TO RESEARCH.
- 5. EDUCATION INDEX 1957-1968.
- 6. EXCEPTIONAL CHILD EDUCATION ABSTRACTS, Vol. I, April 1969. (ERIC documents to that date.)
- 7. Goldberg. SELECTED BIBLIOGRAPHY OF SPECIAL EDUCATION, 1967.
- 8. RESEARCH AND DEMONSTRATION PROJECTS: A BIBLIOGRAPHY 1968. HEW.
- 9. REVIEW OF EDUCATIONAL RESEARCH. 1959, 1963, 1966, 1969.
- 10. PSYCHOLOGICAL ABSTRACTS 1953 June 1968.
- 11. American Foundation for the Blind. DICTIONARY CATALOG OF THE M. C. MIGUEL MEMORIAL LIBRARY.
- 12. Kirk. BEHAVIORAL RESEARCH ON EXCEPTIONAL CHILDREN. 1963.
- 13. U. S. GOVERNMENT PUBLICATIONS MONTHLY CATALOG, 1961-1968.
- 14. American Association of Workers for the Blind. CATALOG.

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